

Appl. No. : **09/734,475**
Filed : **December 11, 2000**

AMENDMENTS TO THE CLAIMS

Please amend Claims 1, 18 and 21 as follows:

1. (Currently Amended) A method of delivering a surround-sound audio signal over the Internet to a client using conventional Internet stereo sound streaming techniques while maintaining compatibility with multiple audio signal sources, the method comprising:

providing a multi-channel audio signal source at a first Internet broadcast location;

encoding the multi-channel audio signal source into a two-channel format;

converting the encoded two-channel audio signal source to a streaming format for transmission over the Internet;

transmitting the streaming format of the encoded audio signal source to a client location;

reconverting the streaming format of the encoded audio signal into an encoded two-channel audio format;

decoding the two-channel format of the audio signal into a multi-channel audio output signal for playback by the client; and

determining whether a second Internet broadcast location is a licensed broadcast location and if the second Internet broadcast location is a licensed broadcast location permitting the client to access, decode, and playback a plurality of types of audio source signals from a second Internet broadcast location where the relative quality of the resulting audio output signals are dependent upon the formats of the original audio source signals wherein at least one of the plurality of types of audio source signals are processed to produce a two-channel audio output, said two-channel audio output configured to simulate said multi-channel surround sound audio output when played on a pair of loudspeakers; and

correcting a perceived height of an apparent sound stage associated with the two-channel audio output;

enhancing bass response associated with the two-channel audio output;
and

correcting a perceived width of the apparent sound stage associated with the two-channel audio output.

Appl. No. : **09/734,475**
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2. (Original) The method of Claim 1, wherein the plurality of types of audio source signals includes conventional stereo signals.

3. (Original) The method of Claim 1, wherein the plurality of types of audio source signals includes Dolby surround encoded audio signals.

4. (Original) The method of Claim 1, wherein the plurality of types of audio source signals includes a monaural signal.

5. (Original) The method of Claim 1, wherein the client represents an individual personal computer user.

6. (Original) The method of Claim 1 wherein encoding the multi-channel audio signal source into a two-channel format is performed using the CS 5.1 encoding method.

7-17. Canceled

18. (Currently Amended) A method of delivering a surround-sound audio signal over the Internet to a client using ~~conventional~~-Internet stereo sound streaming techniques while maintaining compatibility with multiple audio signal sources, the method comprising:

providing a multi-channel surround sound audio signal source at a first Internet broadcast location;

encoding the multi-channel audio signal source into a two-channel format;

converting the encoded two-channel audio signal source to a streaming format for transmission over the Internet;

transmitting the streaming format of the encoded audio signal source to a client location;

reconverting the streaming format of the encoded audio signal into an encoded two-channel audio format;

decoding the two-channel format of the audio signal into a multi-channel surround sound audio output; ~~and~~

determining whether the first Internet broadcast partner is a licensed broadcast partner and if the first Internet broadcast partner is a licensed broadcast partner, processing said multi-channel surround sound audio output to produce a two-channel audio output, said two-channel audio output configured to simulate said multi-channel surround sound audio output when played on a pair of loudspeakers; and

correcting a perceived height of an apparent sound stage associated with the two-channel audio output;

enhancing bass response associated with the two-channel audio output;
and

correcting a perceived width of the apparent sound stage associated with the two-channel audio output.

19. (Original) The method of Claim 18, wherein said encoding comprises encoding using a CS 5.1 encoder.

20. (Original) The method of Claim 18, wherein said decoding comprises decoding using a CS 5.1 decoder.

21. (Currently Amended) An apparatus for delivering a surround-sound audio signal over the Internet to a client using ~~conventional-Internet~~ stereo sound streaming techniques while maintaining compatibility with multiple audio signal sources, comprising:

means for encoding a multi-channel audio signal source into a two-channel format;

means for converting the encoded two-channel audio signal source to a streaming format for transmission over a computer network to a network client;

means for reconverting the streaming format of the encoded audio signal into an encoded two-channel audio format;

means for decoding the two-channel format of the audio signal into a multi-channel audio output signal for playback by the client; and

means for permitting the network client to access, decode, and playback a plurality of types of audio source signals from a second Internet broadcast location ~~where the relative quality of the resulting audio output signals are dependent upon the formats of the original audio source signals~~ if the second Internet broadcast location is a licensed broadcast location;

means for processing said multi-channel audio output signal to produce a two-channel audio output, said two-channel audio output configured to simulate said multi-channel audio output signal when played on a pair of loudspeakers;

means for correcting a perceived height of an apparent sound stage associated with the two-channel audio output;

means for enhancing bass response associated with the two-channel audio output; and

means for correcting a perceived width of the apparent sound stage associated with the two-channel audio output.

Appl. No. : 09/734,475
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SUMMARY OF THE INTERVIEW

Identification of Claims Discussed

Claims 1 and 18

Identification of Prior Art Discussed

U.S. Patent No. 6,694,027 to Schneider ("the Schneider patent").

U.S. Patent No. 6,647,389 to Fitch, et al., ("the Fitch patent").

U.S. Patent No. 5,841,879 to Scofield, et al. ("the Scofield patent").

Proposed Amendments

Applicant proposed clarifying that Claims 1 and 18 are directed to an embodiment of Applicant's invention that determines whether an Internet broadcast partner is a licensed broadcast partner and if so, processes a multi-channel surround sound audio output to produce a two-channel audio output. The two-channel audio output is configured to simulate said multi-channel surround sound audio output when played on a pair of loudspeakers.

This processing of a two-channel audio output also comprises correcting a perceived height of an apparent sound stage associated with the two-channel audio output; enhancing base response associated with the two-channel audio output; and correcting a perceived width of the apparent sound stage associated with the two-channel audio output.

Principal Arguments and Other Matters

Applicants agree with the Examiner that the Schneider patent does not teach processing a multi-channel surround sound audio output to produce a two-channel audio output.

In addition, the Fitch and Scofield patents fail to teach processing a two-channel audio output by correcting a perceived height of an apparent sound stage associated with the two-channel audio output; enhancing base response associated with the two-channel audio output; and correcting a perceived width of the apparent sound stage associated with the two-channel audio output.

Also, none of the cited reference describe the use of such a system the first Internet broadcast partner is a licensed broadcast partner.

Appl. No. : **09/734,475**
Filed : **December 11, 2000**

Results of Interview

It was Applicant's understanding that the Examiner agreed that the cited references failed to teach the system as proposed in Claims 1 and 18. Applicant also agreed to amend Claim 21 along the lines discussed in the interview.